

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the remarks that follow.

Status of the Claims

Claim 68 is amended to correct a typographical error. While Applicant notes the finality of the rejection, Applicant's amendment to claim 68 does not change or alter the claimed invention. Accordingly, Applicant respectfully requests the PTO to enter this amendment. Claims 68-72, 74 and 77 are currently pending and are presented for reconsideration.

Rejections Under 35 U.S.C. 103(a)

Claims 68, 70-72, 74 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0183811 (Irwin) in view of U.S. 6,936,044 (McDaniel) and US 6,602,275 (Sullivan). In particular, it is the PTO's contention that Irwin teaches the claimed method for treating psoriasis, except the teaching of "a chamber adapted to receive a patient." McDaniel and Sullivan are cited to remedy this deficiency. Applicant respectfully disagrees.

Irwin does not teach or suggest a phototherapy method for treating psoriasis that involves the use of UV-light having an emission peak wavelength at or between 312 and 311 nm and a full width half maximum of about 0.1 to 2 nm, as claimed. As admitted by the PTO, Irwin discloses a phototherapy method that uses a UV-light having a "**broad**" wavelength spectrum, for example, UV-light having wavelength in the range from 300 nm to 320 nm. Irwin's stated purpose for utilizing a "*broadband*" of the UV-spectrum for therapy, is to allow delivery of a high dose of radiation, rather than multiple low doses of radiation to the skin, which Irwin states increase the risk of erythema and skin cancer.

Support for this proposition can be found in paragraphs [0037] and [0038] of publication No. 2002/183811. For example, Irwin clearly states that "for effective treatment of skin disorders like psoriasis,.....doses as high as 500 mJ/cm.², 1 J/cm.², and 1.5 J/cm.² of light having wavelengths at least as large as 300 nanometers but less than or equal to about 310 nanometers may be employed to treat skin disorders." See '811 publication at para [0037].

As further elaborated in this paragraph, “[l]ess doses of shorter wavelength light are required in comparison to longer wavelength of light. For example, fluencies in a range of about 50 mJ/cm.² to about 1 J/cm.² of light with a center wavelength of about 305 nanometer (e.g., between 304.5 and 305.5) may produce similar results as fluencies ranging from about 300 mJ/cm.² to about 4 J/cm.² of light having a wavelength centered about 310 nanometers (e.g., between 309.5 and 310.5). *Id.* Based on this exposition, therefore, the skilled artisan would have understood Irwin to teach a method for treating psoriasis that uses UV-light having a shorter wavelength centered at 305 nm, rather than UV-light whose wavelength centered between 311 nm and 312 nm as claimed.

Irwin also teaches against using a a single spectral line of UV light for phototherapy. According to Irwin:

“[e]mploying broadband light, such as for example that includes wavelengths between about 300 and 315 nanometers, as opposed to using a single intense spectral line, e.g. the 312 nanometer line, captures a substantial percentage of the UV energy emitted by the arc lamp.

Limiting treatment to only a single narrow line such as the 312 nanometer line is not preferred as the phototherapy response to this line is nearly twenty times less than the response for light having a wavelength of 302 nanometers. Advantageously, a spectral band of between about 302 to 315 nanometers exploits the higher phototherapy response of the shorter wavelengths such as between about 302 and 305 nanometers as well as the higher spectral emittance obtained for wavelengths ranging between about 305 and 315 nanometers.”

(Emphasis added), See para [0060] of ‘811.

That is, no reading of Irwin would have been understood by the skilled artisan to disclose a phototherapy method in which the light emitted by the light emitting device has a full width half maximum of about 0.1 to 2 nm as claimed. Furthermore, a person of ordinary skill would not want to modify Irwin’s method to use UV-light having a single spectral line (as claimed), because according to Irwin the spectral band of between about 302 to 315 nanometers exhibits a higher phototherapeutic response. See para [0060].

Accordingly, Irwin does not teach a method for conducting psoriasis phototherapy that comprises providing UV-light having an emission peak and a full width half maximum as claimed.

Moreover, modifying Irwin's method to include the use of a chamber adapted to receive a patient suffering from psoriasis would not remedy the defects in Irwin's method so as to arrive at the inventive phototherapeutic method. That is, the secondary references do not teach the use of UV light in having an emission peak at or between 312 and 311 nm and a full width half maximum of about 0.1 to 2 nm, that is suitable for performing psoriasis phototherapy as claimed. Accordingly, the combined teachings of Irwin, McDaniel and Sullivan would not have allowed the skilled artisan to arrive at the claimed methodology.

Claim 68 is patentable over the cited references. The dependent claims by virtue of the fact that they incorporate all the limitations of the base claim. All pending claims are patentable, therefore, and Applicant respectfully requests the PTO to withdraw this rejection.

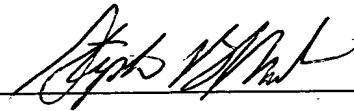
CONCLUSION

Having advanced credible remarks in support of patentability of the claimed invention, Applicant believes that the present application is now in condition for allowance. Favorable reconsideration, therefore, is respectfully requested. The Examiner is invited to contact the undersigned if issues remain that warrant further discussion.

Respectfully submitted,

Date June 9, 2010

By



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The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to the above deposit account.